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EXAMINER

LY, ANH

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/479,432

Applicant(s)

MUSICK ET AL.

Examiner

Anh Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17,20-31,43,44,47 and 49-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17,20-31,43,44,47 and 49-53 is/are rejected.
- 7) ☒ Claim(s) 18,19,41,42 and 48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

1. The appellant has filed Brief on 05/16/2003, which was carefully considered in an Appeal Conference. The conferees found appellant's argument, "the elements of a metadata and mediator," in the claims 1, 24 and 47 (page 6 of Appeal Brief) to be persuasive. It was decided in the conference that the final Rejection in Page #6 would be withdrawn. The Office regrets any inconvenience caused to the applicant.
2. Claims 32-40 and 45-46 have been cancelled

***Allowable Subject Matter***

3. Claims 18-19, 41-42 and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Since the features of "data warehousing applications in the domain of protein sequence and structure analysis; domain of functional genomics and proteomics; and domain of astrophysics." Thus claims 18-19, 41-42 and 48 are allowed.

***Claim Objections***

4. Claim 23 objected to because of the following informalities: The first line of claim 23, "The method of claim 14" is not clear. Since claim 14 recites "The model of claim 12," - Appropriate correction is required.
5. Claims 1-17, 20-31, 43-44, 47 and 49-53 have been considered but are moot in view of the new ground(s) of rejection.
6. Claims 1-17, 20-31, 43-44, 47 and 49-53 are pending in this application.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-6, 8, 20-21, 24-29, 31, 43-44, 47 and 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,411,961 issued to Chen in view of US Patent No. 6,167,563 issued to Fontana et al. (hereinafter Fontana).

With respect to claim 1, Chen discloses identifying a data source of interest (col. 2, lines 18-25 and lines 30-45; also col. 3, lines 28-35 and col. 4, lines 26-39); updating a metadata to reflect information available from said source (col. 7, lines 6-15); automatically generating a mediator based on said metadata (code generation: col. 5, lines 11-24 and lines 62-67 and col. 6, lines 1-4; also see code generation module: col. 14, lines 32-40).

As to the limitation, "writing a wrapper for said source which calls said mediator," Chen does not explicitly indicate the writing a wrapper.

However, Fontana discloses the tool wrapper for writing the code in the context of object (col. 8, lines 41-67 and col. 9, lines 1-12; also see figs 3 and 5).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen with the teachings of Fontana so as to obtain a writing code for the wrapper of the context object (col. 8, lines 41-67). This combination would provide tools to write the code or generation code for object in the wrapper (col. 8, lines 41-67 and col. 9, lines 1-12). Also, it would provide meta models, which is describing the relationships between of entities, data type and

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data schema and translation data from a variety of sources to particular data base schema in order to build a data warehouse (Chen – col. 2, lines 20-45) in the database within a data warehouse environment.

With respect to claim 2, Chen wherein the step of updating a metadata comprises entering new types of information, new data formats for previously defined information, new transformations between data formats, and the schema of said source (col. 2, lines 26-45).

With respect to claim 3, Chen discloses wherein said mediator is fully functional and is automatically generated by a stand-alone mediator generation program (code generation module: col. 14, lines 10-41 and see fig. 7B, item 624).

With respect to claim 4, Chen discloses wherein said mediator generation program automatically defines an API and translation libraries (programming interface: col. 12, lines 1-5; and see fig. 5A, col. 10, lines 17-20 and col. 12, lines 6-12).

With respect to claim 5, Chen discloses wherein said mediator comprises code to translate between source and target representations, possibly using externally defined methods, and load data into said warehouse (col. 5, lines 15-20).

With respect to claims 6 and 8, Chen discloses a method as discussed in claim 1.

As to the limitation, "wherein said wrapper makes use of said mediator," Chen does not explicitly indicate a wrapper.

However, Fontana discloses the tool wrapper for writing the code in the context of object (col. 8, lines 41-67 and col. 9, lines 1-12; also see figs 3 and 5).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen with the teachings of Fontana so as to obtain a writing code for the wrapper of the context object (col. 8, lines 41-67). This combination would provide tools to write the code or generation code for object in the wrapper (col. 8, lines 41-67 and col. 9, lines 1-12). Also, it would provide meta models, which is describing the relationships between of entities, data type and data schema and translation data from a variety of sources to particular data base schema in order to build a data warehouse (Chen – col. 2, lines 20-45) in the database within a data warehouse environment.

With respect to claim 20, Chen discloses wherein said method is used for integrating a new data source into a data warehouse (col. 2, lines 18-25 and lines 30-45; also col. 3, lines 28-35 and col. 4, lines 26-39).

With respect to claim 21, Chen discloses updating a warehouse when a previously integrated data source is modified (col. 7, lines 6-15).

Claim 24 is essentially the same as claim 1 except that it is directed to a computer-useable medium rather than a method ('961 of col. 2, lines 18-25 and lines 30-45; also col. 3, lines 28-35 and col. 4, lines 26-39; col. 7, lines 6-15; code generation: col. 5, lines 11-24 and lines 62-67 and col. 6, lines 1-4; also see code generation module: col. 14, lines 32-40; and '081 of col. 8, lines 41-67 and col. 9, lines 1-12; also see figs 3 and 5), and is rejected for the same reason as applied to the claim 1 hereinabove.

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Claim 25 is essentially the same as claim 2 except that it is directed to a computer-useable medium rather than a method (col. 2, lines 26-45), and is rejected for the same reason as applied to the claim 2 hereinabove.

Claim 26 is essentially the same as claim 3 except that it is directed to a computer-useable medium rather than a method (code generation module: col. 14, lines 10-41 and see fig. 7B, item 624), and is rejected for the same reason as applied to the claim 3 hereinabove.

Claim 27 is essentially the same as claim 4 except that it is directed to a computer-useable medium rather than a method (programming interface: col. 12, lines 1-5; and see fig. 5A, col. 10, lines 17-20 and col. 12, lines 6-12), and is rejected for the same reason as applied to the claim 4 hereinabove.

Claim 28 is essentially the same as claim 5 except that it is directed to a computer-useable medium rather than a method (col. 5, lines 15-20), and is rejected for the same reason as applied to the claim 5 hereinabove.

Claim 29 is essentially the same as claim 6 except that it is directed to a computer-useable medium rather than a method (col. 8, lines 41-67 and col. 9, lines 1-12; also see figs 3 and 5), and is rejected for the same reason as applied to the claim 6 hereinabove.

Claim 31 is essentially the same as claim 8 except that it is directed to a computer-useable medium rather than a method (col. 8, lines 41-67 and col. 9, lines 1-12; also see figs 3 and 5), and is rejected for the same reason as applied to the claim 8 hereinabove.



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Claim 43 is essentially the same as claim 20 except that it is directed to a computer-useable medium rather than a method (col. 2, lines 18-25 and lines 30-45; also col. 3, lines 28-35 and col. 4, lines 26-39), and is rejected for the same reason as applied to the claim 20 hereinabove.

Claim 44 is essentially the same as claim 21 except that it is directed to a computer-useable medium rather than a method (col. 7, lines 6-15), and is rejected for the same reason as applied to the claim 21 hereinabove.

Claim 47 is essentially the same as claim 1 except that it is directed to an apparatus rather than a method ('961 of col. 2, lines 18-25 and lines 30-45; also col. 3, lines 28-35 and col. 4, lines 26-39; col. 7, lines 6-15; code generation: col. 5, lines 11-24 and lines 62-67 and col. 6, lines 1-4; also see code generation module: col. 14, lines 32-40; and '081 of col. 8, lines 41-67 and col. 9, lines 1-12; also see figs 3 and 5), and is rejected for the same reason as applied to the claim 1 hereinabove.

With respect to claim 52, Chen discloses wherein said method is used for integrating a new data source into a data warehouse (col. 2, lines 18-25 and lines 30-45; also col. 3, lines 28-35 and col. 4, lines 26-39).

With respect to claim 53, Chen discloses updating a warehouse when a previously integrated data source is modified (col. 7, lines 6-15).

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9. Claims 7, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,411,961 issued to Chen in view of US Patent No. 6,167,563 issued to Fontana et al. (hereinafter Fontana) and further in view of US Patent No. 5,937,409 issued to Wetherbee.

With respect to claim 7, Chen in view of Fontana discloses a method as discussed in claim 1.

As to the limitations, "wherein said mediator generation program defines a public data representation, wherein said wrapper uses said public data representation," Chen in view of Fontana does not explicitly indicate the public and private data representation.

However, Wetherbee discloses public attribute data type and public attribute data type (col.7, lines 38-49).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen in view of Fontana with the teachings of Wetherbee so as to obtain a relational data store that corresponds to a class type of an object referenced, and it maps collection reference attributes of an object to a table in a relational data store that corresponds to a class type of collection referenced (Wetherbee – col. 3, lines 20-28); and writing code for the wrapper of the context object (col. 8, lines 41-67). This combination would provide tools to write the code or generation code for object in the wrapper (col. 8, lines 41-67 and col. 9, lines 1-12). Also, it would provide meta models, which is describing the relationships between of entities, data type and data schema and translation data from a variety of sources to

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particular data base schema in order to build a data warehouse (Chen – col. 2, lines 20-45) in the database within a data warehouse environment.

Claim 30 is essentially the same as claim 7 except that it is directed to a computer-useable medium rather than a method (col.7, lines 38-49), and is rejected for the same reason as applied to the claim 7 hereinabove.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,411,961 issued to Chen.

With respect to claim 9, Chen discloses metadata model comprising abstractions (metadata model for an abstract data model: col. 7, lines 6-10); translation (translation rules or component for metadata model: col. 10, lines 26-55 and col. 12, lines 30-41); mappings (mapping rules for metadata model: col. 3, lines 28-35) and database descriptions (schema: col. 5, lines 11-24).

Chen does not clearly disclose “a DataFoundry metadata model,” which is comprising abstractions, translations, mappings and database descriptions. However, Chen discloses the metadata model with abstract data, transformation rule, mappings rule and schema of database based on the technique for modeling the enterprise data and loads them into a data warehouse (col. 2, lines 16-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teachings of Chen such as abstractions, translations, mappings and data

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schema of data model and attributes, domains (col. 2, lines 24-45) so as to obtain a DataFoundry metadata model for maintaining a data warehouse in the database within a data warehouse environment.

11. Claims 10-11 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,411,961 issued to Chen in view of US Patent No. 6,199,195 issued to GoodWin et al. (hereinafter Goodwin).

With respect to claim 10, Chen discloses a metadata model as discussed in claim 9.

As to the limitation, "a UML DataFoundry metadata representation," Chen does not explicitly indicate a UML.

However, Goodwin discloses UML (col. 8, lines 42-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen with the teachings of Goodwin so as to obtain a metadata model and object modeling defining data within a database (Goodwin – col. 8, lines 45-50). This combination would provide tools for generating source code objects and ones of the unified models (col. 3, lines 12-25). Also, it would provide meta models, which is describing the relationships between of entities, data type and data schema and translation data from a variety of sources to particular data base schema in order to build a data warehouse (Chen – col. 2, lines 20-45) in the database within a data warehouse environment.

With respect to claim 11, Chen discloses a metadata model as discussed in claim 9.

As to the limitation, "a mediator generation program, wherein said mediator generation program generates a mediator," Chen does not explicitly indicate a mediator generation program. .

However, Goodwin discloses generation source code for metadata model (col. 3, lines 12-26).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen with the teachings of Goodwin so as to obtain a metadata model and object modeling defining data within a database (Goodwin – col. 8, lines 45-50). This combination would provide tools for generating source code objects and ones of the unified models (col. 3, lines 12-25). Also, it would provide meta models, which is describing the relationships between of entities, data type and data schema and translation data from a variety of sources to particular data base schema in order to build a data warehouse (Chen – col. 2, lines 20-45) in the database within a data warehouse environment.

With respect to claim 22, Chen discloses a metadata model as discussed in claim 9.

As to the limitation, "a UML DataFoundry metadata representation," Chen does not explicitly indicate a UML.

However, Goodwin discloses UML (col. 8, lines 42-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen with the teachings of Goodwin so as to obtain a metadata model and object modeling defining data within a database (Goodwin – col. 8, lines 45-50). This combination would provide tools for generating source code objects and ones of the unified models (col. 3, lines 12-25). Also, it would provide meta models, which is describing the relationships between of entities, data type and data schema and translation data from a variety of sources to particular data base schema in order to build a data warehouse (Chen – col. 2, lines 20-45) in the database within a data warehouse environment.

With respect to claim 23, Chen discloses wherein said data structures correspond to said abstractions and said translations (col. 5, lines 30-35 and col. 7, lines 1-15).

12. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,411,961 issued to Chen in view of US Patent No. 6,199,195 issued to GoodWin et al. (hereinafter Goodwin), and further in view of US Patent No. 5,870,746 issued to Knutson et al. (hereinafter Knutson).

With respect to claims 12, Chen in view of Goodwin discloses a metadata model as discussed in claim 9.

As to the limitation, "reading said metadata; generating translation libraries, generating API," Chen in view of Goodwin does not explicitly indicate reading, generating metadata, libraries and API.

However, Knutson discloses reading said metadata translation libraries and generating API (col. 5, lines 32-38, col. 6, lines 52-67, col. 7, lines 1-15, col. 8, lines 55-64 and col. 11, lines 30-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen with the teachings of Goodwin so as to obtain tools that are used to retrieve, analyze and present data from data warehouses, also let the users to reuse or re-generate the report over the new data and it would also be desirable to provide a method for allowing the user to segment and partition a database based upon attributes associated with the data in the database (Knutson - col. 1, lines 38-67 and col. 2, lines 1-8), and a metadata model and object modeling defining data within a database (Goodwin - col. 8, lines 45-50). This combination would provide tools for generating source code objects and ones of the unified models (col. 3, lines 12-25). Also, it would provide meta models, which is describing the relationships between of entities, data type and data schema and translation data from a variety of sources to particular data base schema in order to build a data warehouse (Chen - col. 2, lines 20-45) in the database within a data warehouse environment.

With respect to claims 13-17, Chen in view of Goodwin discloses a metadata model as discussed in claim 9.

As to the limitation, "reading metadata, public and private " Chen in view of Goodwin does not explicitly indicate reading, generating metadata, libraries and API and private and public.

However, Knutson discloses wherein the step of reading said metadata comprises reading the abstraction metadata; reading the translation metadata; reading the database description metadata; and reading the mapping metadata (col. 5, lines 32-38; col. 6, lines 62-67 and col. 7, lines 1-11; col. 12, lines 64-67 and col. 13, lines 1-25; col. 6, lines 62-67, col. 7, lines 1-15, col. 16, lines 65-67 and col. 17, lines 1-11); wherein the step of generating translation libraries comprises developing public and private class definitions and implementations of data structures (col. 5, lines 30-55 and col. 11, lines 42-51); wherein said data structures comprise said abstractions and said translations (col. 40, lines 38-55 and col. 6, lines 42-67 and col. 7, lines 1-15); wherein generating the mediator consists of creating public and private definitions and implementations of a class or classes capable of receiving data in one format, converting it to another format, and loading it into a data warehouse (col. 5, lines 30-55 and col. 11, lines 42-51); wherein said data is received by a receiving data structure defined within said translation library and said data is loaded into a warehouse whose schema corresponds to the database description component of the metadata (col. 1, lines 30-65 and col. 4, lines 30-62; and col. 6, lines 42-48 and col. 7, lines 11-15).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen with the teachings of Goodwin so as to obtain tools that are used to retrieve, analyze and present data from



data warehouses, also let the users to reuse or re-generate the report over the new data and it would also be desirable to provide a method for allowing the user to segment and partition a database based upon attributes associated with the data in the database (Knutson - col. 1, lines 38-67 and col. 2, lines 1-8), and a metadata model and object modeling defining data within a database (Goodwin – col. 8, lines 45-50). This combination would provide tools for generating source code objects and ones of the unified models (col. 3, lines 12-25). Also, it would provide meta models, which is describing the relationships between of entities, data type and data schema and translation data from a variety of sources to particular data base schema in order to build a data warehouse (Chen – col. 2, lines 20-45) in the database within a data warehouse environment.

13. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,411,961 issued to Chen in view of US Patent No. 6,167,563 issued to Fontana et al. (hereinafter Fontana) and further in view of US Patent No. 5,781,906 issued to Aggarwal et al. (hereinafter Aggarwal).

With respect to claim 49, Chen in view of Fontana discloses a method as discussed in claim 1.

As to the limitations, "wherein said method is applied to data warehousing applications in the domain of medical image processing and analysis," Chen in view of Fontana does not explicitly indicate the medical image and analysis.

However, Aggarwal discloses information warehousing applications in multimedia including medical images (col. 1, lines 18-35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen in view of Fontana with the teachings of Aggarwal so as to obtain a data warehousing applications in multimedia for medical image (col. 1, lines 18-35), and writing code for the wrapper of the context object (col. 8, lines 41-67). This combination would provide tools to write the code or generation code for object in the wrapper (col. 8, lines 41-67 and col. 9, lines 1-12). Also, it would provide meta models, which is describing the relationships between of entities, data type and data schema and translation data from a variety of sources to particular data base schema in order to build a data warehouse (Chen – col. 2, lines 20-45) in the database within a data warehouse environment.

14. Claims 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,411,961 issued to Chen in view of US Patent No. 6,167,563 issued to Fontana et al. (hereinafter Fontana) and further in view of US Patent No. 6,101,483 issued to Petrovich et al. (hereinafter Petrovich).

With respect to claims 50-51, Chen in view of Fontana discloses a method as discussed in claim 1.

As to the limitations, "wherein said method is applied to data warehousing applications in the domain of tracking consumer and customer preferences; and wherein said method is applied to data warehousing applications in the domain of

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satellite and terrestrial communication systems analysis," Chen in view of Fontana does not explicitly indicate the consumer and customer preferences and satellite and terrestrial communication systems analysis.

However, Petrovich discloses consumer for ordering goods from home (col. 11, lines 47-51); customer preferences (col. 11, lines 1-15); satellite (col. 4, lines 15-18; and communication systems (col. 7, lines 55-60).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Chen in view of Fontana with the teachings of Petrovich so as to obtain a method having a domain of shopping system for customer, consumer in both from a home of a user and a shopping establishment (col. 11, lines 1-15 and col. 1, lines 5-10); and writing code for the wrapper of the context object (col. 8, lines 41-67). This combination would provide tools to write the code or generation code for object in the wrapper (col. 8, lines 41-67 and col. 9, lines 1-12). Also, it would provide meta models, which is describing the relationships between of entities, data type and data schema and translation data from a variety of sources to particular data base schema in order to build a data warehouse (Chen – col. 2, lines 20-45) in the database within a data warehouse environment.

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**Contact Information**

15. Any inquiry concerning this communication should be directed to Anh Ly whose telephone number is (703) 306-4527 or via E-Mail: **ANH.LY@USPTO.GOV**. The examiner can be reached on Monday - Friday from 8:00 AM to 4:00 PM.

If attempts to reach the examiner are unsuccessful, see the examiner's supervisor, Kim Vu, can be reached on (703) 305-4393.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 746-7238 (after Final Communication)

or: (703) 746-7239 (for formal communications intended for entry)

or: (703) 746-7240 (for informal or draft communications, or Customer Service Center, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (receptionist).

Inquiries of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

AL  
Jul. 22<sup>nd</sup>, 2003

  
JEAN M. CORRIELUS  
PRIMARY EXAMINER